

## Claims

What is claimed is:

1. An apparatus for performing pattern recognition, said apparatus comprising:  
  
an input arrangement which inputs features;  
  
5        a base model provision arrangement which provides at least one base model;  
  
an environment detector which ascertains an environment from which the at least one base model originated; and  
  
a transform arrangement which produces a target model based on a feature vector corresponding to the environment from which the at least one base model originated.
- 10        2. The apparatus according to Claim 1, wherein said apparatus is adapted to perform speech recognition and said input arrangement is adapted to input linguistic features.
3. The apparatus according to Claim 1, wherein said base model provision arrangement is adapted to build a pool of base models.

4. The apparatus according to Claim 3, wherein said base models are Gaussian Mixture Models.

5. The apparatus according to Claim 3, wherein said environment detector is adapted to express the closeness of a set of at least one input feature to a given base  
5 model.

6. The apparatus according to Claim 1, wherein said feature vector represents at least one likelihood associated with at least one input feature in a given environment.

7. The apparatus according to Claim 1, wherein said environment detector is adapted to inform the production of said feature vector in correspondence with the  
10 environment from which the at least one base model originated.

8. A method of performing pattern recognition, said method comprising the steps of:

inputting features;

providing at least one base model;

15 ascertaining an environment from which the at least one base model originated;  
and

producing a target model based on a feature vector corresponding to the environment from which the at least one base model originated.

9. The method according to Claim 8, wherein said method is adapted to perform speech recognition and said inputting step comprises inputting linguistic features.

5           10. The method according to Claim 8, wherein said providing step comprises building a pool of base models.

11. The method according to Claim 10, wherein said base models are Gaussian Mixture Models.

12. The method according to Claim 10, wherein said ascertaining step comprises  
10   expressing the closeness of a set of at least one input feature to a given base model.

13. The method according to Claim 8, wherein said feature vector represents at least one likelihood associated with at least one input feature in a given environment.

14. The method according to Claim 1, wherein said ascertaining step comprises informing the production of said feature vector in correspondence with the environment  
15   from which the at least one base model originated.

15. A program storage device readable by machine, tangibly embodying a program of instructions executable by the machine to perform method steps for performing pattern recognition, said method comprising the steps of:

inputting features;

5 providing at least one base model;

ascertaining an environment from which the at least one base model originated;

and

producing a target model based on a feature vector corresponding to the environment from which the at least one base model originated.